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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/044,969	01/15/2002	Yousuke Moriuchi	026575-065	2991
Platon N. Mand	7590 04/13/200 iros	7	EXAM	INER
BURNS, DOAL	BURNS, DOANE, SWECKER & MATHIS, L.L.P. P.O. Box 1404 EREZO, DARWIN P	ARWIN P		
P.O. Box 1404 Alexandria, VA 22313-1404			ART UNIT	PAPER NUMBER
			3731	
	·			
SHORTENED STATUTOR	Y PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE	
3 MONTHS		04/13/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

	Application No.	Applicant(s)			
	10/044,969	MORIUCHI ET AL.			
Office Action Summary	Examiner	Art Unit			
	Darwin P. Erezo	3731			
The MAILING DATE of this communication ap Period for Reply	pears on the cover sheet with	h the correspondence address			
• •	IVIC CET TO EVOIDE AM	ONTHICK OF THIRTY (20) DAYS			
A SHORTENED STATUTORY PERIOD FOR REPL WHICHEVER IS LONGER, FROM THE MAILING E - Extensions of time may be available under the provisions of 37 CFR 1. after SIX (6) MONTHS from the mailing date of this communication. - If NO period for reply is specified above, the maximum statutory period Failure to reply within the set or extended period for reply will, by statut Any reply received by the Office later than three months after the mailing earned patent term adjustment. See 37 CFR 1.704(b).	DATE OF THIS COMMUNIC .136(a). In no event, however, may a report of the service	CATION. ply be timely filed THS from the mailing date of this communication. ANDONED (35 U.S.C. § 133).			
Status					
1) Responsive to communication(s) filed on 1/27	7/07.				
• • • • • • • • • • • • • • • • • • • •					
3) Since this application is in condition for allows	ance except for formal matte	ers, prosecution as to the merits is			
closed in accordance with the practice under	Ex parte Quayle, 1935 C.D.	11, 453 O.G. 213.			
Disposition of Claims					
4)⊠ Claim(s) <u>1-4,6,7 and 16-30</u> is/are pending in t	the application.				
4a) Of the above claim(s) is/are withdra	• •				
5) Claim(s) is/are allowed.					
6)⊠ Claim(s) <u>1-4,6,7 and 16-30</u> is/are rejected.					
7) Claim(s) is/are objected to.					
8) Claim(s) are subject to restriction and/	or election requirement.				
Application Papers					
9)☐ The specification is objected to by the Examin	er.				
10) The drawing(s) filed on is/are: a) acc		v the Examiner.			
Applicant may not request that any objection to the	· ·				
Replacement drawing sheet(s) including the correct					
11) \square The oath or declaration is objected to by the E	xaminer. Note the attached	Office Action or form PTO-152.			
Priority under 35 U.S.C. § 119					
12) Acknowledgment is made of a claim for foreign	n priority under 35 U.S.C. §	119(a)-(d) or (f).			
a) ☐ All b) ☐ Some * c) ☐ None of:	,,	· · · · · · · · · · · · · · · · · · ·			
1. Certified copies of the priority documen	its have been received.				
2. Certified copies of the priority documen		plication No			
Copies of the certified copies of the price	ority documents have been r	eceived in this National Stage			
application from the International Burea	au (PCT Rule 17.2(a)).				
* See the attached detailed Office action for a list	t of the certified copies not re	eceived.			
Attachment(s)	C	(DTO 446)			
Notice of References Cited (PTO-892)		ımmary (PTO-413) /Mail Date			
Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date		ormal Patent Application (PTO-152)			

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DETAILED ACTION

Response to Arguments

1. Applicant's argument, filed on 1/27/07, regarding the Jang reference failing to teach a plurality of waves positioned between portions of a single one of the waved elements has been fully considered and is persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Ainsworth et al.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

- (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.
- 3. Claims 1, 2, 6, 16-19, 22 and 24-28 are rejected under 35 U.S.C. 102(e) as being anticipated by US 6,616,689 to Ainsworth et al.

(claim 1) Ainsworth discloses an expandable stent having:

a plurality of annular expanding members arranged a predetermined distance apart from each other in an axial direction of the stent and forming a waved element (see attached figure); and

a plurality of waved connecting members connecting ridges/bottoms of the waved elements (see attached figure);

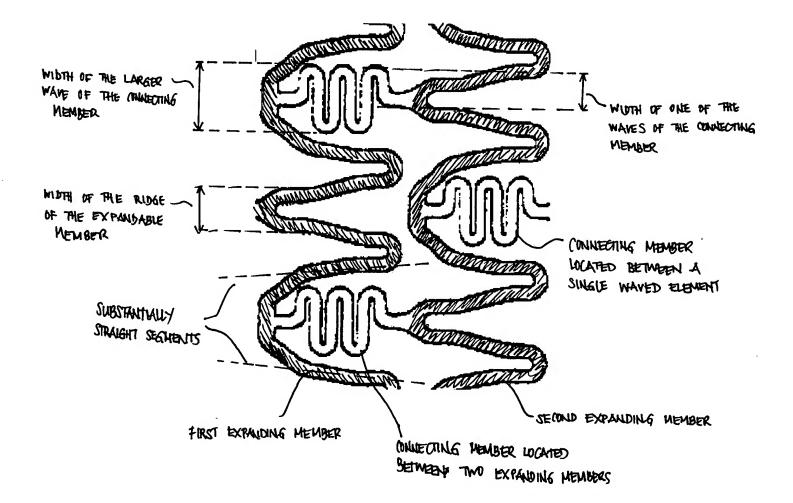
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wherein the plurality of annular expanding members are arranged in an axial direction of the stent such that no substantial phase difference exists in the waves of the waved elements,

wherein each of the waved connecting members has a plurality of waves including a wave formed in the clearance between adjacent annual expanding members and having an amplitude larger than that of the other wave, the largest wave having a height measured circumferentially of the stent, the wave height of the largest wave being larger than the width of the ridge (see attached figure), and

wherein the plurality of waves comprising each waved connecting members includes a plurality of waves positioned between the waved elements.



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(claim 2) The ridges depicted above are connected to adjacent ridges. It could also be viewed as the bottoms of the expanding members are connected to each other.

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(claim 6) The total length of the connecting member is more than 1.3 times the distance between the ridges (see figure above).

(claim 16) The waved connecting member have at least three waves (see attached figure above).

(claims 17 and 26) See the rejection to claim 1 and the following: Ainsworth also discloses the expanding members having a plurality of substantially straight segments; wherein the connecting member comprises a wave that is larger than that of another wave of the connecting member; and wherein a plurality of waves are positioned between the substantially linear segments of the first or any of the expanding members.

(claims 18, 19, 27 and 28) See the rejection to claim 2.

(claim 22) See the rejection to claim 16.

(claims 24 and 25) Ainsworth discloses more than two annular expanding elements, each having the same structure as cited in the independent claims.

Claim Rejections - 35 USC § 103

- 4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
 - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 5. Claims 3, 4, 20, 21, 29 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ainsworth et al. and in view of US 6,113,627 to Jang.

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Ainsworth discloses all the limitations of the claims except for the connecting members having a width that is not larger than ½ of the width of the waved element, or any specific recitation of the width of each of the waves connecting members falling within the range of 0.03-0.08 mm. However, Jang discloses a similar stent structure having connecting members that appear to be ½ the width of the expanding members (see last Office action). The smaller width of the connecting members provide additional flexibility to the stent structure. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the connecting members of Ainsworth to have a width that is less than ½ the width of the expanding members because it would provide additional flexibility to the stent structure. This is beneficial if the stent structure is to be deployed in a tortuous vessel. With regards to the range limitation of 0.03-0.08 mm, it would have been obvious to arrive said limitation because it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

6. Claims 7 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ainsworth et al.

Ainsworth discloses all the limitations of the claims except for the width of the clearance between adjacent annular expanding members falling within the range of 0.4-0.8mm. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the width of the clearance between adjacent annular expanding members falling within the range of 0.4-0.8mm, since it has been

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held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Darwin P. Erezo whose telephone number is (571) 272-4695. The examiner can normally be reached on M-F (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anhtuan T. Nguyen can be reached on (571) 272-4963. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Darwin P. Erezo Examiner

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